



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,371	12/19/2001	Mohammad Abu-Orf	N00411/70000 (PCL)	7835
37462	7590	05/05/2004	EXAMINER	
LOWRIE, LANDO & ANASTASI RIVERFRONT OFFICE ONE MAIN STREET, ELEVENTH FLOOR CAMBRIDGE, MA 02142			HRUSKOCI, PETER A	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/025,371	ABU-ORF, MOHAMMAD	
	<b>Examiner</b>	<b>Art Unit</b>	
	Peter A. Hruskoci	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 1724

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Crawford et al. 5,003,814. It is submitted that Crawford et al. appear to disclose (see col. 3 line 9 through col. 8 line 67) the method steps recited in the instant claims.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawford et al. as above, and further in view of Pickering et al. and the Bache et al. publication from Water Resources. The claims differ from Crawford et al. as applied above by reciting a step for measuring a rheological property of at least one of the liquid-rich stream and the solid-rich stream. Pickering et al. disclose (see col. 1 line 41 through col. 2 line 2 line 55, and col. 7 lines 45-55) disclose that it is known in the art to monitor the performance of the dewatering process to aid in controlling the amount of conditioner or flocculant added to a waste suspension. Bache et al. disclose (see pages 1-5) that it is known in the art to utilize viscosity and turbidity measurements in a sludge centrate, to control the polymer dosage to the sludge. It would have been obvious to one skilled in the art to modify the method of Crawford et al. by utilizing the recited measuring step in view of the teachings of Pickering et al. and Bache et al., to aid in

Art Unit: 1724

controlling flow rate of treatment agent to the wastewater stream. With regard to claim 30, it is submitted that both Pickering et al. and Bache et al. as applied above, disclose the use of a centrifuge to separate solids from a wastewater stream. In regard to claims 32 and 33, it is submitted that the flow rate of polymer utilized in Crawford et al. and Bache et al. appear to be adjusted to determine a minimum viscosity.

Applicant argues that Crawford et al. diverts the sludge for an offline non-continuous measurement, and do not teach a method to treat wastewater comprising a step of continuously measuring a rheological property of the wastewater stream. It is submitted that the sludge diverted in Crawford et al. is considered patentably distinguishable from the wastewater stream recited in the instant claims. It is noted that page 4 of the instant specification discloses that the wastewater stream may include 15% biosolids. It is further submitted that Crawford et al. appear to disclose continuous sampling in col. 8 lines 47-55. It is further noted that page 6 of the instant specification appears to disclose that continuous measurement can include repeated measurements. Furthermore, the instant claims fail to exclude offline measurements, and fail to include online measurements.

Applicant argues that Pickering et al. teach that offline analysis, involving a side measurement or side stream measurement, such as disclosed in Crawford et al., and post-separation measurements are unsatisfactory. It is submitted that Pickering et al. appears to teach that it is known in the art to utilize both online and offline, and pre-separation and post-separation measurements, to control the addition of a polymer flocculating or coagulating agent to wastewater suspension. It is noted that the density measurement utilized in Pickering et al. appears to be the measure of a rheological property as in the instant method. Furthermore,

Art Unit: 1724

applicants have not submitted sufficient comparative evidence with the prior art used in the above rejections to support the above argument.

Applicant argues that Bache et al. does not teach, suggest, or provide any motivation to perform offline or online measurements of viscosity or even control the addition of a polymer based on viscosity of the liquid rich stream. It is submitted that the teachings of Bache et al. appear to suggest that measurements of centrate viscosity can be used to control the polymer dose to a wastewater or sludge stream. It is noted that Bache et al. disclose polymer conditioning expenses are significant, and that it is generally a goal to establish optimum use of polymers.

Applicant alleges that there is no expectation that the proposed combination of Crawford et al., Pickering et al., and Bache et al. would be successful and result in the invention as recited in independent claim 26, because the references teach away from each other. Applicant has not supplied sufficient factual evidence to support the above allegation.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 1724

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter A. Hruskoci whose telephone number is (571) 272-1160. The examiner can normally be reached on Monday through Friday from 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Peter A. Hruskoci  
Primary Examiner  
Art Unit 1724

4/30/04